CHICAGO

USERS GROUP

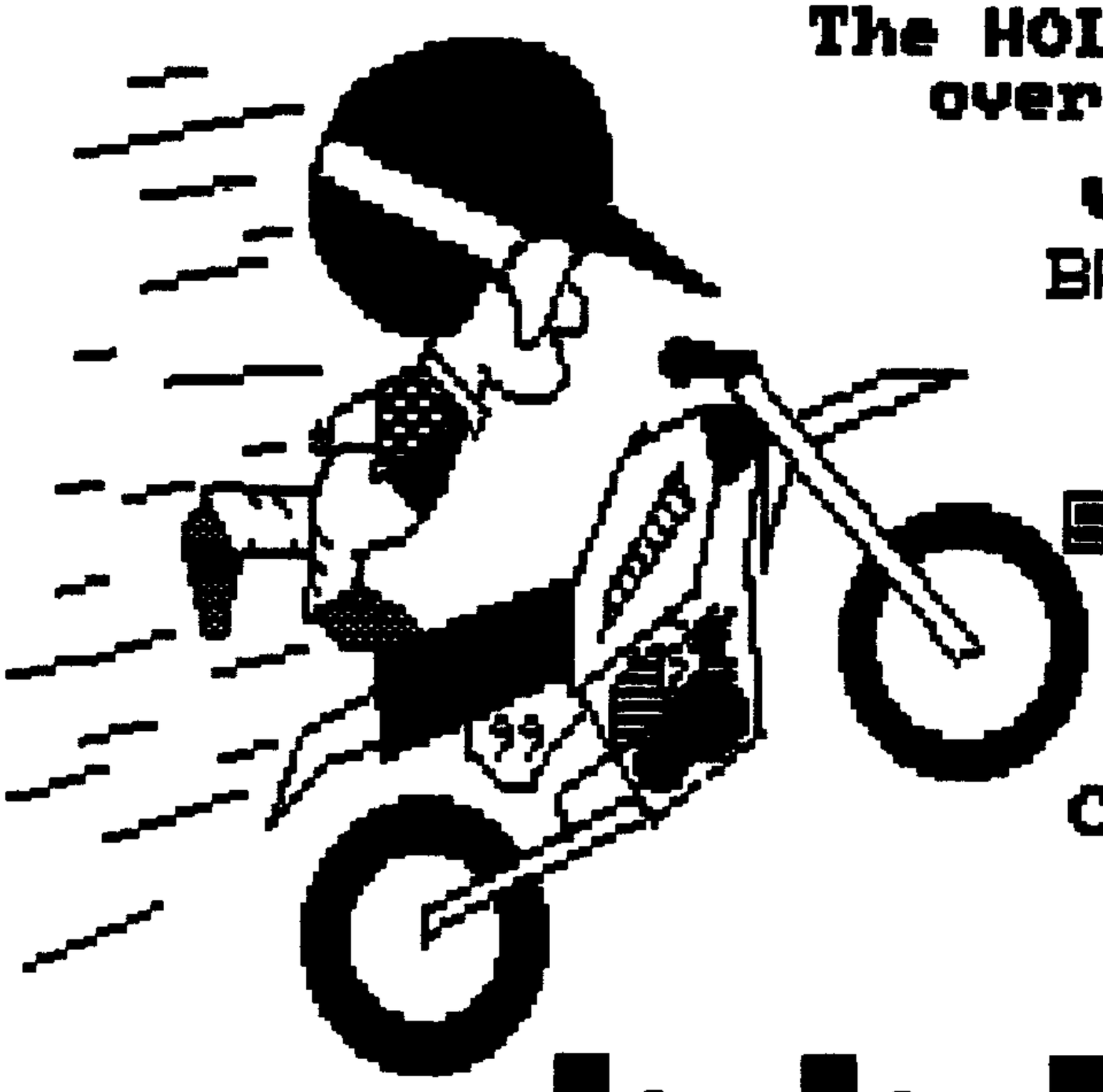
PRESENTS

CHICAGO TIMES

NEWSLETTER OF THE CHICAGO TI-99/4A USERS GROUP

RUMORS BECOME REALITY

JANUARY 30, 1987
EDITOR: Carole Goldstein



The HOLIDAYS are over, so...

JUMP

BACK INTO

THE

T.I.

SPIRIT

and...

come to the next CHICAGO UG meeting.

BY: DAN GRONOWSKI

THE FEBRUARY MEETING. . . .

will be held on Saturday FEB. 7, 1986 from 1:00 to 3:00 in the Fireside Lounge a Triton College. The meeting will feature an introduction to Pascal, library demos and presentation of the tape sent to us by Millers Graphics.

Number 1 McCann Software News January 1987

VERSION 2.00 IS HERE!!

THE PRINTER'S APPRENTICE version 2.00 includes the following new features.

1. No more messy file specifications to deal with. Easier to get RESULTS!
2. FORMATTER has an integral text editor with word-wrap for instant text creation and graphics text printing with no files needed.(still can use files too)
3. We simplified both the FORMATTER and SCHEDULER user interface resulting in a more useable and powerful program.
4. SCHEDULER allows composite text and graphics images to be saved to disk.[EXTRN]
5. SCHEDULER is now smarter, no empty print passes result in faster output.
6. A configuration program allows default printer name and screen colors to be set up.

We took a powerful porgram and made it easier and even more powerful. We listened to both our friends and critics and included as many changes and new features as possible into TPA V2.00.

FONTS BY CYNTHIA

TPA Acapulco (ou)

TPA AMERICANA

TPA Bold TPA Bold

TPA CLARE UC

TPA OU ENGRAVE ENGRAVE

TPA OU NLQ OU NLQ TPA OU

TPA (ou) Pipeline TPA

TPA UNIVERSITY

TPA gives you the tools to create pages like this ad. Included are a character editor to make custom fonts, a picture editor to create or edit "artist" pictures, a text formatter that does hyphenation, microjustification and includes a text editor, finally, an electronic paste-up program called the SCHEDULER which puts it all together, like we did here.

For our friends who own an earlier version of TPA we offer an upgrade to V2.00 including version documents for $3.00 if you send in your original system disk.

We're still requesting copies of those fantastic newsletter pages created with TPA and fonts for our "master" collection. Remember to send fonts on SSSD media and a postpaid mailer if you want'em back.

We have arranged a special purchase price for the combination of TPA and Fonts Disk 1 it is only available through dealers who support the 99/4A. In the Chicago area call: HUNTER ELECTRONICS (312) 766-9503.

A SMALL PRICE TO PAY	
THE PRINTER'S APPRENTICE	22.50
BUSINESS GRAPHS 99	15.95
TPA FONTS DISK ONE	11.50

This ad was completely created using only THE PRINTER'S APPRENTICE, Copyright 1986 Mike McCann all rights reserved. Requires 32K, Disk System and either E/A or Extended BASIC. Compatible with TI-99/4 printer, Gemini 10X, and Epson compatible graphics printers including Panasonic 1091, Star NX and IBM. To order send check or money order to McCann Software P.O. Box 34160 Omaha, NE 68134.

IN THIS ISSUE...

IBM COMPATIBILITY FOR THE TI	Millers Graphics	Page 4
THE DISASSEMBLY	Dave Wakely	Page 5
BASICALLY YOURS	Rich Klein	Page 9
FULL DUPLEX	Irwin Goldstein	Page 15
MEMBERSHIP CHAIRMAN SPEAKS	Don Jones	Page 16
FINANCIAL REPORT	Len Rovner	Page 18
SOFTWARE REVIEW	Jack Topham	Page 19
KRACKER KRUMBS	Rich Klein	Page 21
THE PASCAL ADVANTAGE	Mike Maksimek	Page 25
FROM THE OTHER ORPHANAGES	Jack Topham	Page 26
VICTORY OVER DEATH	Don Jones	Page 28
LIBRARY SHELF	Bob Demeter	Page 31
RAM BUGS?	Texincia Lubbock	Page 34

Artwork by Buzz Krantz, Dan Granowski, and Danny Goldstein

BULLETINS:

The Beginners SIG will meet shortly after the meeting.

A Pascal SIG will be forming after the meeting.

MEETING DATES FOR THIS COMING YEAR ARE AS FOLLOWS:

FEB 7	JUNE 6
MAR 14	SEPT 12
APRIL 4	OCT 6
MAY 2 (Ironwood Room)	NOV 7 (Ti Faire)
	DEC 5

The Chicago TImes is published 10 TImes a year, monthly, except during June and July. Chicago TImes is not affiliated with Texas Instruments in any way and is supported only by its subscribers and advertisers. Subscriptions are free with membership in the Chicago TI99/4A User's Group. The Chicago TImes is also distributed free to any other User's Group that wishes to reciprocate. Articles contained herein may be re-printed by another User's Group Publication provided credit is given to the Chicago TImes as the original source of the article. Comments and letters are welcome, as is the submission of original articles and programs.

ANNOUNCEMENT

IBM COMPATIBILITY FOR THE 99/4A

Technical Info:

1. Two part system. A TURBO XT and a small bridge box that connects to the side I/O port on your 4A.
2. The TURBO XT is an 8 Mhz, 4.77 Mhz (switchable) mother board, power supply, XT style case, CGA color graphics card (both RGB and Composite), Floppy Disk controller 1 half high DS/DD disk drive, Parallel port and 256K of Ram on the mother board. The mother board has sockets for up to 640K of ram. There are 8 expansion slots, two of which are used by the CGA card and the Floppy disk controller.
3. The bridge box has inputs for 4A Video in, XT Video in and outputs for XT Keyboard out and Monitor out. It also contains the software for Keyboard switching between 4A mode and XT mode and the software to convert the 4A key strokes into XT keycodes. It also has a pass through so you can keep your P-Box or other Periphs hooked up.
4. Mode switching from 4A to XT can be done through Basic or X-Basic with CALL XT or by holding down FCTN CTRL ENTER on power up of the 4A.
5. Mode switching from XT to 4A is done by pressing FCTN CTRL ENTER.
6. The ONLY items shared by the two systems are the 4A keyboard and your current monitor or TV. Yes you can get 80 columns out of a composite monitor, but it is easiest to read with the color turned off in 80 mode. The XT allows MODE 40 which also gives you 40 column mode. Graphics programs, such as games and drawing programs work fine in 80 column and most other software that doesn't combine weird foreground and background text colors are also quite readable.
7. By not sharing the disk drives it is possible to do concurrent processing on the XT. Example: Go into XT mode, start up your COMMUNICATIONS software, log on to a BBS and!qtart a down load. Now you can switch modes back to the 4A and do whatever you would like in 4A mode while the XT is still down loading from the BBS!!
8. We have tested this system on a number of 4A system configurations and have found it to be very compatible. Since it is an IBM clone it is also fully compatible with both IBM software and IBM HARDWARE. Yes, you can add ANY IBM cards you would like to the system.
9. The minimum 4A system requirements: A TI 99/4A console and a monitor or a TV set with RF modulator.

General Info:

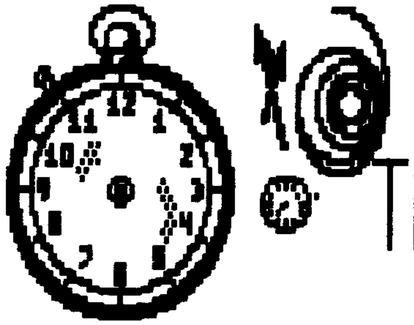
1. This system is being marketed by Triton Products Company in San Francisco, CA. They are also handling the production of the bridge boxes and they have contracted for the Turbo XT clones to their specifications.
2. The system has a 30 DAY money back guarantee and a 1 YEAR parts and labor warranty.
3. The cost for this system (Turbo XT, Bridge box and cables) is 499.00 plus 19.90 for shipping and handling.
4. Their toll free number for additional info and/or a 6 page 4 color brochure on this system is 800-227-6900, Monday through Friday - 6AM to 6PM and Saturday 9AM to 4PM, Pacific Time.
   PLEASE DON'T CALL THEM UNTIL MONDAY, JANUARY 19, 1987 FOR TECHNICAL INFO OR QUESTIONS. You can call before then to get a brochure. The people that answer the phones are going through a training course this week so they won't be able to properly answer your questions until then.
5. Delivery is scheduled to start on March 1st of this year.

We have been using this system for awhile now and we are very pleased with its performance. This isn't vaporware, ALL RD, testing and software is complete and the units are ready for production, so the March time frame is a reality.

At last, a MAJOR expansion for the 4A. We hope you are as pleased with this product as you have been with our other products in the past. As the Triton Brochure says:

MAKE THE IBM CONNECTION TO YOUR TI99/4A

----------MG---------



THE DISASSEMBLY

Dave Hakely

FLASH!: New computer debuts!; The last meeting; the next meeting; Group enhancements; Bye-bye Call-Pak; Other THings:

There I was, with this column completely finished by the newsletter deadline, when I checked The Source for late breaking news. On Jan. 15, 1987, a news item was downloaded to the TISIG, as well as to Compuserve, about the awaited IBM compatible computer that Miller's Graphics has been working on. The complete information article is reprinted in this newsletter. I would humbly note that the system they came up with is remarkably close to the predictions made in this column last month. The manufacturer (actually contractor) for this system is the well known Triton Products in California. Their Triton Turbo XT system is a 256K RAM fully IBM compatible computer which utilizes a "bridge box" to add TI-99/4A compatibility. Detailed technical info is hard to obtain from Triton, even from employees who have received "training" about this machine. I have literally only a few minutes of speculation about this computer before this column has to go into the newsletter, but I am going to give it a shot.

The first reactions among TI users that I have heard, predictably, are some degree of disappointment. There are those already stating "This is just an IBM clone, and if I wanted one I could buy one now, so what's the big deal?" These people should think a little deeper. First of all, the specifications on the IBM clone side seem adequate. The machine is expandable to 640K RAM on the motherboard, with 4.77 or 8 Mhz CPU (which is most likely an 8088-2) speed switchable. The docs available state that there are 8 IBM slots, with two taken up with the color graphics card and floppy disk controller, although when I called Triton I was informed that there will be 5 slots left empty for the user (so what's in that other slot?). From what the Triton person (who did not appear especially technically minded) could make of the information in front of her, it appeared the unit has a 120 Watt power supply. I was told that the unit definitely comes with an IBM style keyboard which is fully usable in 99/4A mode. Could this be why Miller cancelled his plans to produce one? One DS/DD drive is included, and a second can be user added, but you have to supply the monitor. So a clone is a clone is a clone. Those original IBM clones which were not 99.9% compatible are now gone, and this machine is not one of them. The person I talked to at Triton has seen Microsoft Flight Simulator, one of the tests of compatibility, running on this computer, and I was not expecting an 80386 machine anyway. Check the Computer Shopper ads if you like, $499 is a very competitive price for units like this, but you could probably beat it by a few bucks if you look hard.

The secret to this machine, however, and about which there is precious little information, is the "bridge box". This is apparently a small box which plugs into the right side P.E. Box connector on the /4A, and into the Turbo XT, with a pass through to keep your P.E. Box connected. It is this box which passes information to and from the XT, but just what information is passable? The docs state that it has in/outputs for video, keyboards, and monitor, but the notice on The Source also hinted at "some" disk drive sharing. A few minutes of speculation yields about a zillion questions on this particular unit. Some of them are: Does the bridge box read PE Box bus lines? If so, is it a true CRU device with its own DSR? If it doesn't come with it, can software be written to allow data files or software to be stored on the drives in the XT? How about the TI using some of that 256/640k (Ram disks, anyone)? How about bridge box improvements (I can already hear devious TI minds working on bridge box ROM upgrades.)?

Think about this architecture scheme for a moment. Okay, it is not a complete, throw-away-your-PE Box-and-console unit with /4A compatibility (recall my copywrite comments from the last column). What TI users who just have to have IBM compatibility really want is one power switch which turns on one unit which uses one keyboard and one monitor, all of which runs two completely different operating systems. Dream on. We are talking apples and oranges here. Notice how even Myarc has stopped talking about IBM compatibility for the 9640. This unit, folks, may be as close as we ever get. In the case of the new Myarc 9640, however, there may be a problem since there is no longer any console to connect to. If you put a Myarc card in your PE Box and use the Myarc keyboard, where do you plug in the bridge box? Someone may be able to figure out a way around this since the TI keyboard lines must be available somewhere. So consider that if you want a Myarc 9640, you may be able to have it, too. Put it in your P.E. Box AND get the Turbo XT if you want. You may NOT have to choose between these two systems if you do not want to. Run Myarc AND IBM, assuming you have enough money, of course. The design philosophy of the Turbo XT system seems to be "interfere with as little as possible". And, the Geneve already comes with an IBM style keyboard which MAY be usable with this system. Also, while I am unfamiliar with exactly how the marvelous Rave 99 keyboard operates, it seems to me that if the information coming out the side port is unchanged, that it may also be acceptable as a single keyboard alternative. We are beginning to talk some bucks here, so just how important IS IBM compatibilitiy to you?

With so many questions still unanswered, why is it that I have already ordered one from Triton? Because it also comes with a 30-day money back guarantee if you are not satisfied, as well as a one-year parts and labor warrantee. In my particular case, however, I was already considering an IBM clone upgrade. My Zenith Z-148 has no expansion slots, and only talks to my TI via an RS-232 cable. Plus, as much as I like my 49-99 keyboard, I was becoming tempted by the Rave 99 IBM board. My case, however, may not be yours. Perhaps you could care less about IBM programs, in which case you might prefer to let some of us test the waters and tell you what this system can do for you. To do so, I also hearby announce a Triton Turbo XT Special Interest Group (SIG), which will commence as soon as my unit arrives. Shipment is scheduled for the first week of March, and I am told that ALL RD, testing, and software is COMPLETED. We'll see.

Meanwhile, as far as I know, we still have a TI-99/4A User Group to run...

MUSH!: "Neither rain, nor snow, nor dark of night...". Make that snow, lots of overdue Chicago snow, on the day before the January meeting. Somehow it didn't stop somewhere over 100 group members from making it out to the Ironwood Room at Triton. Paul Farber, one of our many graphics whizes, did double duty, demoing both TI Artist and Joy Paint, and giving some insights into the strengths and weaknesses of both. Jack Topham, rapidly becoming our Official Group Demo Person, then took over and put Display Master through its paces, and what terrific paces they were! This is one heck of a graphics display package in the hands of someone who knows what they are doing. Jack had pre-programmed some "slide presentations" with this program, but also used its ability to insert windowed text messages over the pictures. Very impressive. Jack also showed us the "listing" which he had written to instruct Display Master. This appeared to me to be a form of crude graphics language (I will avoid the term Graphics Programming Language for obvious reasons), wherein the user can specify a sequence of pictures to present, how long to present them, and when and where to display various text messages. It occured to me that this could be used for some visually interesting education packages, or perhaps as a "demo" system for new software. For example, a programmer could work up a mock version of a typical screen from his application, display it with Display Master, then pop up various text messages to train users. Just an idea, but any software which can, within one minute of seeing it, get you thinking about what you can do with it is probably useful software to someone. On the down side, the pictures took some time to load from disk before being displayed, which is no problem if you just happen to have a $200+ RAM disk handy. Perhaps some sort of memory "pre-loading" could be added to this program. Like my (ahem) counterpart Jerry Pournelle (also a Psychologist, incidentally) at Byte might say, if you need a program like this, you need it bad. Recommended.

Sometime during the presentations, John Behnke, our former head librarian who hasn't been able to attend many meetings lately because he has been busy becoming a Chicago police officer, explained that those new programs listed in the newsletter would not in fact be at the meeting, because the current head librarian, Bob Demeter, was apparently stuck in the snow in Indiana. Finally, for those more inclined toward word processing, Todd Kaplan gave perhaps his first public demonstration of the TI-Writer-like word processor he has been working on. Actually, that's an unfair comparison. Todd's is definitely superior. He explained that those who already knew TI Writer would be able to use his program immediately, and the enhancements that I saw or heard about, such as the ability to edit in multiple columns and expanded text buffer size, I definitely liked. I forget exactly who he stated will be producing it, but he said that it will be a cartridge-based product which should be finished soon, and that he would be willing to give a full demonstration as early as next month. Gee, I hope it's not too late Todd, but of course you WILL be including keyboard macros, context sensitive help screens, and an on- line spelling checker and thesaurus, won't you? Todd? Todd?...

WHAT, ALREADY?: Contrary to what it indicated in the last newsletter, there will NOT be another TI Faire on Feb. 7. What does happen is that Buzz Krantz's pet digital groundhog sees its shadow, and we have a User Group meeting and six more weeks of computing. To celebrate, we will most like have a demo of PR Base, I will probably have to lug my VCR to the meeting so we can view the tape sent us by Craig Miller, and there is a good chance I will be calling some of the group User/Programmers I spoke

with in December to demo their home grown applications. I say all this tentatively because last month I was sure that Competition Computer was coming to do the printer demo, but they have asked for a one month reprieve until March. Perhaps they heard what a "tough house" the audience at Triton can be. Ask Mechatronics.

FULL SERVICE LANE: The group will shortly be installing a separate "group hot line" number which will be attached to a phone answering machine. So the next time we get 10 inches of snow the evening before a meeting, or you hear that the Des Plaines River now runs through the College Center building at Triton, you will have some place to call to find out the facts. Or, if you lost your newsletter, didn't get your newsletter, or your dog ate your newsletter, you now have no excuse for not knowing there is a meeting. Details about this services will be available as soon as it can be put into operation.

IS THIS MY MORTGAGE PAYMENT OR MY PHONE BILL?: That wailing and gnashing of teeth which was heard at the last meeting was coming from those users addicted to their Hayes-compatible modems. To these people Ma Bell will soon be sending a large "ATZ" (or whatever the command is) to their bills, via the demise of metropolitan area Call- Pak. Time and distance will apparently be the basis for just about everything except a small local radius. What can you do about this? 1) Consider whether it is time to purchase a 1200 baud modem to greatly speed up transmission. Depending on your use, this could pay for itself faster than you might think. 2) No more chatting with Sysop. You can probably talk faster than you can type. 3) No more "why don't I just download everything?" sessions. 4) Move to Niles, Illinois, home of the board, land of the free (of dreaded message units if you call from there). However, I have been to Niles, and you should know that it is basically one large shopping center. Consider this as only a desparate last step.

SubrouTInes: The group will be producing a "Best of the Chicago TImes" book. Our newsletter will be five years old with the March issue. A lot of good stuff has passed between the covers in that time...The response to my Texincia revelations last month was practically zilch. This leads me to believe that 1) no one reads this column (possible); 2) No one cares who or what Texincia really is (also possible); 3) This would all be fine, except Rich Klein tells me he sees content similarities between my column and Ram Bugs, suggesting that maybe I am Texincia, and wrote last month's findings to throw everyone off. This is JUST what I needed to hear; 4) I should stick to writing about real or imaginary TI compatible computers rather than speculating about real or imaginary TI compatible people; 5) neither 1 nor 3, although it occurs to me that Texincia probably agrees with my earlier comment that "A lot of good stuff has passed between the covers", only she means it in a somewhat different sense...Somehow, in a moment of temporary insanity, I volunteered to Carole to compile a complete index of every issue of the ChiTImes ever produced. I got out of the gate fast, but am currently bogged down somewhere in late 1984 or early 1985. Maybe by next month...Carole, it wasn't my fault. I can't be responsible for my column being late if they keep announcing new computers on the day this is due, now can I? Carole? Carole?...

BASICALLY YOURS

Rich Klein

If you're like me, one column on Basic isn't enough. If so, pick up a copy of MMicropendium, which is distributed at each meeting. In it, you should find a column on Basic programming tips and tricks by none other than C. Regena. For those who are relatively new to your systems (not more than, say 2 1/2 years), you may not have seen Regena's column in 99'er, 99'er Home Computer, Home Computer, No Computer Magazine. You may have missed her in COMPUTE! Magazine. Don't miss her in Micropendium. She's been doing this for quite some time, so let's avail ourselves of her devotion to the TI Home Computer and her expertise in programming in Basic.

Have you ever wanted to write yourself a program to do a set of specific tasks and wanted to set up a nice screenful of prompts to work through. You've seen this on other systems and marvelled at the professional appearance of such a display? If you have Extended Basic, such a task is easy with ACCEPT AT and DISPLAY AT. With TI Basic, this is not such an easy task, since there are no formal commands to place text at specific screen locations.

There is a way to accomplish this with the graphics commands available. These are CALL HCHAR() and CALL GCHAR(). The first places characters at specified scren locations and the second reads them from specified locations. These can be used in routine to emulate Extended Basic ACCEPT AT and DISPLAY AT commands. With careful coding, a minimum loss of speed can be realized.

To start, a screenful of prompts can be generated. Let's see...What if we were to use our screen access to enter directory information, such as name, address, and phone. We could generate a screenful by successive PRINT statements such as:

```
100 CALL CLEAR
110 PRINT "NAME:"::"ADDRESS:"::"CITY,STATE,ZIP"::"PHONE:"::::::
```

This is an easy and fast way to generate a screen. Each line is double spaced and after the last line is PRINTed, the screen scrolls up five lines. "How is this done?" you might ask. The colons are interpreted as "linefeeds". Each colon encountered causes the screen to scroll up one line and the next item to be printed beneath it. If there are two colons after a print item, then the screen scrolls up two lines, leaving an empty line between two PRINT items. To determine how many empty lines there will be between them, simply count the spaces between the colons. Remember, if you end a PRINT statement without a colon, semicolon, or comma, then the line is executed as if it had a colon after it. This means that the screen will scroll one line after an item is PRINTed in TI Basic. In Extended Basic this is slightly different. The line will scroll before a subsequent PRINT statement instead of after the previous one. It might seem like I'm saying the same thing two different ways, but there is a difference. Under normal circumstances, it would appear that TI Basic and Extended Basic print to the screen the same way. But if you PRINT to the screen and then display something using CALL HCHAR, then the differences become apparent. Try a program which PRINTs something and then does a CALL HCHAR on Row 24 of the screen in TI Basic and then try the same thing in Extended Basic.

In TI Basic, the screen scrolls up one line after the PRINT is executed

and then the CALL HCHAR is placed on the empty Row 24. In Extended Basic, however, the screen will not scroll until the next PRINT item is encountered and consequently, the CALL HCHAR is done right over the item just PRINTed. I found this out quite by accident when I was experimenting with "QUITting" from a running program. Remember to put a space between each colon in E/B or they will be interpereted as statement separators

To get back to the point, each colon is used to indicate a linefeed, and when encountered, causes the contents of the screen to scroll up one line. I guess TI wanted to treat the screen like it was a printer, since it works in a fashion similar to one.

Another way to generate a screenful of prompts would be to store them in DATA statements, READ them, and PRINT them from a routine. This is useful if you will be using several screens and want to switch between them repeatedly. It might look like this:

```
100 CALL CLEAR
110 RESTORE 170
120 FOR A=1 TO 4
130 READ A$
140 PRINT A$::
150 NEXT A
160 PRINT :::::
170 DATA NAME:,ADDRESS:,"CITY,STATE,ZIP:",PHONE:,,
```

This is a bit longer, but it can be made into a subroutine and called from any part of the program. Any set of DATA statements can then be used by simply RESTOREing the line number of the desired set. A beneficial side effect of using this as a subroutine is that your program will take on a more professional look by establishing a standard for screen prompts. This is nice fo menus and submenues.

Why RESTORE the DATA statements? This is done for two reasons. First, if you have more than one set of DATA statements, RESTORE allows you to control which to use. Second, if you utilize the same DATA statement more than once, then the RESTORE statements will keep you from running out of DATA and getting a DATA ERROR IN XXXX message.

Next is a loop to READ and PRINT each DATA item. Notice that each item is PRINTed and then two linefeeds are inserted. This double spaces each item and after the loop is finished, more linefeeds are added to scroll the screen up more with the PRINT ::::: statement. The overall effect should be similar to the previous example except that it will execute a tad slower.

After the PRINT statement is the DATA statement. This is where the text is stored for the PRINT statements. Each of these is READ in turn into the string variable A$, after which A$ is PRINTED. Although each DATA item is separated by commas, why is one of them enclosed in quotes? This is because it contains commas, which are used to separate DATA items, and since we want to display them they must be enclosed them in quotes to keep them from being misinterpereted as separators. Due to a quirk in the way TI reads DATA statements, there is a very noticable delay as it READs the last DATA item in a list. Placing two commas at the end of your last DATA statements and not READing them eliminates this delay. Use of RESTORE is then essential to prevent generating an error.

You may use HCHAR to directly place text on the screen, but this must be done one character at a time and is time consuming. Using PRINT or PRINT and READ with DATA statements is generally more efficient. HCHAR and even VCHAR are nice to create an effect when time is not as important. Different ways of creating screens are limited only by your imagination.

After you've created a screenful of prompts by whatever means you've selected, what remains is to create a means of accepting input from each prompt on the screen. This is accomplished by using the HCHAR, GCHAR, and KEY subprograms. HCHAR is used to place the cursor on the screen and any characters entered in response to a prompt. GCHAR is used as part of the CALL KEY routine and the backspace routine. This reads a character from a location on the screen. KEY is used to read keypresses from the keyboard. If we put all these together, we can come up with a nice ACCEPT AT routine.

When building the key input routine, variables are necessary to give needed flexibility to the routine to make it useful. The row, column, and a string to put keypresses in each require a variable for use. Since the key routine will generate the string variable, it is only necessary to provide a row variable and column variable before accessing this routine. It is also a good idea to keep the names of any variables simple and at the same time, representative of its function in the subroutine. For this reason, let's name the row variable "R", and the column variable "C", and the string of keypresses generated "KEY$".

After the routine is executed, then the contents of KEY$ can be worked on or copied into another variable, since KEY$ will be used over and over again.

To have a routine that looks "normal" with blinking cursor and all, two loops must be executed in the subroutine; one with the cursor "on", and another with the cursor "off". When the cursor is "on", its a good idea to store the previous contents of that screen location so that when its "off" that character can be replaced. While these characters are on the screen, the keyboard is being read. I've found that reading the keyboard five times in each loop creates the timing necessary to "blink" the cursor at the proper rate.

Because of the slowness of Basic, the routine must be as short as possible to keep keyboard response reasonably quick. If you are a speed demon on the keyboard, no CALL KEY routine will be quick enough for you, but if you have had little or no formal typing training or experience, then you may not notice the response time of this routine.

To keep the response as quick as possible, the loop will check only for a keypress. Once detected it will first check if it is a displayable character. If it is, it will be displayed and entered into KEY$. If not, then it will be checked to see if it was a backspace or ENTER. If not, it will be rejected and the board will be scanned until ENTER is pressed. When it is, then control will be returned to the main program loop which could look like this:

```
1000 R=5
1010 C=10
1020 GOSUB 20000
1030 MYSTRING$=KEY$
```

This is what is required for the subroutine. The (R)ow and (C)olumn, the GOSUB to the routine, and the return variable are all that's necessary for this routine. What action is taken after the input is made is dependent on what you wanted it for.

The key scan subroutine is:

```
20000 KEY$=""
20005 CC=C 20010 CALL GCHAR(R,CC,CODE)
20020 CALL HCHAR(R,CC,30)
20030 FOR X=1 TO 5
20040 CALL KEY(0,K,S)
20050 IF S=0 THEN 20070
20060 GOTO 20150
20070 NEXT X
20080 CALL HCHAR(R,CC,CODE)
20090 FOR X=1 TO 5
20100 CALL KEY(0,K,S)
20110 IF S=0 THEN 20130
20120 GOTO 20150
20130 NEXT X
20140 GOTO 20010
20150 IF K<32 THEN 20220
20160 CALL HCHAR(R,CC,K)
20165 KEY$=KEY$&CHR$(K)
20170 CC=CC+1
20180 IF CC<31 THEN 20210
20190 CC=C
20200 REM * CAN INCREMENT ROW HERE IF DESIRED USING R=R+1 *
20210 GOTO 20010
20220 IF K<>13 THEN 20240
20225 CALL HCHAR(R,CC,32)
20230 RETURN
20240 IF K<>8 THEN 20220
20250 CALL HCHAR(R,CC,32)
20255 KEY$=SEG$(KEY$,1,LEN(K$)-1)
20260 CC=CC-1
20270 IF CC>2 THEN 20010
20280 CC=C
20290 GOTO 20010
```

This is the basic routine. It flashes the cursor at an appropriate rate, accepts key input, displays text as typed, and backspaces. When you press enter it recognizes this as the end of the input and returns to the main program. The backspace routine has one minor flaw in it. If you try to backspace over the first character entered, the program crashes with an error message. This is because of the simple method of removing characters from the string of text characters typed. To improve this would require time that I haven't got, since I'm already pushing the deadline.

Also, I've not RESequenced the listing to show you that we're all human (even if some of us don't look it) and make mistakes. Any line that is not in sequence was added later. The first addition was the initialization of the variable "CC". This was added so the initial column could be preserved. This way backspace and word wrap don't go too far to the left. That's the reason line numbers are incremented by tens or so. If you need to add a line or two to improve something or correct a flaw,

then this makes it easy to add a line between the lines.

The next change was the inclusion of the string manipulation (eat your heart out, Nick!) routines that I forgot to include earlier. The first one adds the most recent text character pressed to KEY$, while the second removes the last text key pressed as part of the backspace routine. Let's go through this routine line by line:

20000 Clears out KEY$. This is done so any previous value of K$ is not added to.
20005 Sets CC equal to C. This protects the integrity of the initial column value which can then be used to maintain the left "margin".
20010 This is actually used for the second key scanning loop. It stores the character on the "current" screen position pointed to by R and CC. The ASCII code is stored in the variable called CODE. By the way, this and all Graphics commands work with ASCII codes and since CALL KEY does also, no conversion is necessary for this routine.
20020 Places cursor character on current screen position.
20030 Initializes X loop for first key scan.
20040 CALL KEY reads keyboard once and places the status read into "S" and the ASCII code of any key pressed into "K".
20050 Checks the status of the keyboard and if no key was pressed goes to the NEXT X statement to increment the loop counter.
20060 This statement is executed if a key was pressed. Control is passed to line 20150 which begins to determine which key was pressed.
20070 Increments the loop and then checks to see if the new value exceeds the maximum value specified when the loop was initialized (five). If it does, then execution fall s through to the next line.
20080 This line replaces the character stored in CODE on the current position on the screen. Remember, if your here, then no key was pressed and its time to "turn off" the cursor.
20090 Initializes second key scanning loop.
20100 Scans keyboard once. 20110 Checks status of keyboard as before.
20120 Branches to same place as before if key was pressed here.
20130 Increments loop and branches back to line 20100 if five or less. If X is greater, then execution continues on next line.
20140 Branches back to 20010 and the first loop since it is time to "turn on" the cursor. The only way to get out of this larger loop is to press a key.
20150 If a key was pressed, then you end up here. This line checks if you pressed a displayable text character and if not, branches lower to check if the key pressed was Enter. If a text character was pressed, then execution continues with the next line.
20160 Displays text at the current screen position pointed to by R and CC.
20165 Adds the character pressed to the character string which can later be used in the program for your own purposes.
20170 Increments the column pointer by one.
20180 Checks to see that CC is not past the edge of the text boundary (right margin) of column twenty eight. CALL HCHAR and all the graphics commands utilize the entire screen width of 32 characters but PRINTed text occupies the 28 columns of the screen from column 3 to column 30, inclusive. TI did this as a convenience to TV user's, since older sets had so much overlap some users could not see the two edges of the graphics screen. If CC is within the limit, then this scan is complete and it goes back again and scans for another keypress.
20190 If CC exceeds the right margin, then it is reset to the left margin here. 20200 REMark statement that, if desired, the row can be

incremented here. Obviously, more lines would be required to perform limit checking. As the routine is, all input is displayed on one line and wraps around to the beginning of the same line when the right margin is exceeded.

20210 Once the column is reset, then the routine goes back to check for the next keypress.

20220 If the key pressed was not a displayable character, then execution continues here and checks if ENTER was pressed or not. If not, it branches to line 20240 to check for a backspace (left arrow). If ENTER was pressed, then whatever character was stored in CODE is placed on the screen in the current position just in case the cursor was "on". This removes the cursor from the screen for neatness sake.

20230 This line RETURNs you to the main program at the line after the one that called the subroutine. This line can only be gotten to if ENTER was pressed.

20240 This is the start of the backspace routine. It checks to make sure the key pressed was indeed the left arrow key. If any other key was pressed then it is ignored and the board is scanned again.

20250 Now that we're sure that backspace was pressed, we can get to work. The first thing to be done is to remove the character under the cursor. The CALL HCHAR here places a space there to accomplish this.

20255 Now the last character is removed from the text string. We simply set the string equal to the same string with its LENgth reduced by one. Remember the minor bug in handling it this way. This is because SEG$ does not accept zero as a parameter and if you try to eliminate the last character you have a string of zero length.

20260 We now must move the current position back one space by subtracting one from the column value.

20270 Let's check to see that the column doesn't go back past the left margin.

20280 Reset left margin, if necessary.

20290 Go back and scan keyboard again.

Whew! That took a lot longer to explain than it did to write. This is a basic screen input subroutine which needs only a (R)ow and (C)olumn value going in, and gives you a string of characters pressed coming out. You can see why the backspace routine portion was a simple erase as you go affair. If it were more complex, it would require more code to implement, more code to remove select characters as they were typed over, perhaps a DELete routine, and all this additional code would ssssssslllllloooooowwwww things down tremendously. I feel this routine as a whole is of use in Basic applications, and would be worthwhile to learn or keep in your routine library.

That's about it for this month and with any luck on my part, I'll see you at the next meeting.

FULL DUPLEX

Irwin Goldstein

During the past few days, John Behnke and I have been discussing a new version of our already super users group BBS. Personally, I am quite happy with the old version, but John insisted that we could still find room for improvement.

"Ok", I said, "What do you propose we do?" "Well, for openers", says John, "we get a Horizon Ram Disk to keep our Myarc Ram Disk company. We then get all our download programs of of the floppy (slow) and put them on Ram (fast). Then we open a new download file called "Archive" so we have a place to store all our download programs that are too old to keep but too good to throw away." Next he says we should put instructions in the transfer sections so as to make these operations fool-proof for even the first time BBS user. "We could call it the <H>elp command to be found in the download and upload menus".

"That sounds pretty good", I told him. "Any other crazy ideas?" "Sure", he says, "Lets add a "logoff" message that any user can put up and it will appear just after the flash message. The idea being that any user can then, in effect, put up his own flash message for all other callers to see upon logging onto the BBS. It would be done by using the <G> command to "logoff" the BBS. You would be asked if you want to leave a "Logoff" message. The "Logoff" message would stay until another message takes its place".

"You can't get any crazier than that" I told him. "Oh yeah, sure I can. How about a VIEW FILE feature located in the download section menu visable when the T>ransfer key is pressed. We can make this option send any DIS/Var 80 file directly to the monitor and avoid goint to disk drive. In this way, one can "view a file" using any computer without requiring a TI system with a disk drive."

"Sounds great. Are you sure you can do all this?" "Sure", he says, "all I need is a couple of hours to write the program, 6 days and Hank Ellerman's can o RAID to debug it, and a bunch of users to enjoy it."

Well, we got the Horizon Ram Disk with no problem. We tested it and it works great. Did we get the new version up and running with all these neat features? Call and find out for yourself. After all, do I have to tell you guys everythin?

In case you don't already know, our BBS number is 312-966-2342. We are open 24 hours each day, 7 days a week. We never close, just like downtown N.Y.

DOES ANYONE EVER READ MY ARTICLE?

I thought that I would change the title of my article because I find that I am constantly being asked questions that I try to deal with in my monthly article. In the future, before you write or grab me by the hair during the meeting, to ask me a question, first try reading my article to see if I haven't already dealt with the subject in the article. I realize that I don't have interesting and beautifully written articles like the ones that Dave Wakely writes monthly. (Congratulations, Dave, that last article was one of the best that I have ever read!) Still, there may be some important information contained within these humble lines. I respectfully request that all members at least skim my article in order to see if there is something that you need or want to know. Therefore, please bear with me. Here, I would like o mention that many members have never returned their completed membership application forms which they received when they first joined the group. Some of these same members have since come to the Faire, renewed their memberships, sent me letters asking various questions, but they have consistently neglected to fill out and send me their membership application forms even though I have requested them in a previous article.)

One question that has been coming up lately is, "Why haven't I received my 1987 membership card?" Well, Sports Fans, those of you who have read my last two articles will realize that I have said that your new cards will be stapled inside of the January 31, 1987 issue, this issue. (If yours is missing, just let me know and I will issue you another one.) Those of you who have not renewed your memberships will not be receiving a membership card and this will definitely be the last issue which you will be receiving until your dues for 1987 are received. If you have not yet renewed your membership, please do so now. The cost for your renewal is $18.00. For our brothers and sisters who are not in the continental United States or Canada, the renewal rate is now $21.00. The difference is for the additional postage. Also, remember, do not send cash. Please send a check, a money order, or a bank draft. Make your checks out to the Chicago Area TI Users' Group, and please indicate your name and your membership number on a piece of paper, enclosed with your dues. This is the only way that you can keep this publication coming to your home on a monthly basis.

By now all of you sports fans out there should know that during this time of the year, the only game in town for me is membership renewals. At this time, we still have 235 members who have not renewed their memberships. I can't help feeling a little bad. Everytime that I see a member who has not renewed, I ask myself the question, "How have we failed to serve or meet the needs of this user?" I do realize that there are some people whose needs we will never be able to fulfill regardless of what we do. Relative to that, we can assume no responsibility. There are also those who leave our TI community for legitimate and understandable reasons, and this must be accepted as nothing is for everybody. As we are all individuals, we all have our individual needs. I just don't want for someone to quit our group because he/she erroneously thought that our computer was unable to fulfill some specific need while at the same time the computer was truly able to deal with the task at hand. Again, I admit that the TI computer is not appropriate for all needs and I am well aware that there are certain other computers which are capable of dealing with certain tasks for which the TI computer is unequipped. As an users' group, I feel that we have a responsibility to help our members solve those problems which they have with their TI computers which can be solved. If you have a problem, please don't hesitate to come forward with it. If you are not able to attend our meetings, don't feel bashful about sending a letter to our newsletter or to whomever you think can and will address your problem. Also, if you feel that your needs are not being met, please let us know how we can better serve you. Your input is important as it is the only way that we can keep our organization fresh and useful.

At this time, I would like to welcome to our TI community Mr. Mike (alias "The Frogman," alias "Froggy," alias "Scuba Maniac") Maksimik. Those of you who frequent our B.B.S. will recognize his name as he has been very helpful and instrumental in helping a lot of users (me included) by answering a lot of difficult questions of a technical nature. Mike happens to be very well versed in U.C.S.D. Pascal. I have therefore encouraged him to write for our newsletter and to form a Pascal Special Interest Group (S.I.G.), which will meet at the conclusion of our regular meeting. I was hoping to introduce him to our executive board last month, but our "Frogman" was swimming under snow and was therefore unable to make the meeting. I urge you to pay close attention to what this young man says. Those of you who presently have p-code cards, but have been unable to do anything with them, will now find relief. Those of you who don't have p-code cards may want to find one after listening to this man speak and reading his articles. I, personally, have no knowledge of the Pascal language at this time, but I do know that like the "c" language, it is highly "portable," i.e., programs written in this language can be used on many different brands of computers, often without any alterations. In other words, programs written in Pascal or "c" for an I.B.M. or an Apple, etc., can be run on our TI computers using the p-code card. Keep your eyes and ears open as there is much more to come!

Believe it or not, I have a vision. My vision is of the thousands of people in the world with TI computers finding out that when they they purchased their $49.95 fire sale special they really did something right. Another part of my dream is that there are people out there in the bush or in the veldt, with their unenhanced TI computers with only their extended BASIC modules and cassette storage capability who are able to find the necessary support from our group which will allow them to have their computing needs met without them spending a great deal of money. (Incidentally, if I may digress, all cassette tape users should look into purchasing the two programs, "CASSETTE LOAD" and "CASSETTE TRANSFER" from our library. These programs allow you to transfer the programs in ROM modules to tape.) My vision also includes people finding out that their "lowly" and "humble" machine is able to meet needs which they never before dreamed of. This means that the kids who want to play games are finding really great games with speech, graphics, and sound qualities which they are unable to duplicate on any other computer or game machine. My vision is of the serious student finding that his/her TI is great as a word processor or as a means of studying Pascal or assembly language, or FORTRAN, or COBOL. (All of these languages are presently supported by the Myarc 9640 Family Computer which recently was released to the market. This computer has finally hit and it is TI compatible!) My vision includes the family man/woman who finds the machine a great financial tool. I also dream of teachers finding out that their TI has a great educational potential. In other words, without making any judgement on the many choices which our users may make for their use of their machines, I would like to see people finding out that their TI machines are able to work for them. I would also love to see all beginners and owners new to our machine supported in such a way that they acquire the skills and knowledge which they require to make their machines do exactly what they want. I also look forward to the day that 1 Megabyte of RAM memory will be standard for most of our machines. This is my dream and though it is now only a dream, I can't help feeling that it isn't all that impractical.

Speaking of dreams, you may by now be aware that I have volunteered to act as the chairman of our forthcoming Faire. Because of the truly great job that our chairman for the last two years, Sandy Bartels, I don't want to see the quality of this most important activity diminished in any way. I also feel that this is a very crucial time for our machines. I predict that this will be an important year for us. I precict that we will see more than one machine, on the market, which will be compatible with our "lowly" TI. I also forsee compatibility with the I.B.M. I see renewed support in the area of both software and hardware for our "orphan." I see renewed respect and awe for those of us who persevered and hung onto our machines. I have prognostications of a great Faire at which those third party developers and producers and our faithful vendors will do more and better business than ever before. In other words I feel that 1987 will be the year of "The Great Leap Forward" for our 99/4A computer. The only unfortunate thing that I forsee is a further depression in the market for the TI Professional computer due to poor

and unrealistic marketing. I also feel that the people at Texas Instruments will see the gold which they let slip through their fingers. I can still well remember the fear and dread which I felt when I learned that Texas Instrument was no longer going to support the 99/4A. I remember the anger and resentment which I felt as I saw them gradually cutting back on any and all kinds of support or assistance to the thousands of us who had purchased the machines. Now, I am very certain that the biggest favor that Texas Instruments could have ever done was to get out of the life of my 99/4A. As Dave said in his last article, "Thank you, Texas Instruments, wherever you are," but we don't need you anymore.

Well, Sports Fans, 1987 has the potential to be one great year for all orphan owners. Let's all pitch in in order to make our collective dreams come true. Why don't some of you consider volunteering? It's the work of our volunteers that makes our group as strong as it is.

While it's on my mind, thank you Carole Goldstein for your selfless and tireless efforts to create this fine publication. It is clear to me that your efforts have been very crucial and highly instrumental in the preservation of the environment for our beloved machine. Things would have been very different without you and your sacrifices. Keep up the great work, Carole!

Speaking of our newsletter, I was very pleased to see articles by members who are not in the Chicago area. Bill Gaskill, who wrote about data bases last month, lives in Grand Junction, Colorado. Steven Peacock, who has been writing BASIC Assembler, lives in Jacksonville, Florida. Bob Demeter, one of our librarians, lives in Whiting, Indiana (and he commutes to River Forest every month, when the snows aren't too bad, to attend our meetings). Ollie Hebert, who wrote in our Super Winter Issue, lives in Brewton, Alabama. I just want for you to see that you don't have to be close by to make a contribution to our group or to our newsletter. I would love to hear from our brothers and sisters across the pond (the Atlantic or the Pacific). Your contribution can and does count! And don't forget our sweet Texincia Lubbock; she's from **NOWHERE!**

Well, Sports Fans, that's it for another month. Have a nice one until next time. Until then, I wish you peace and I urge you to keep on processing and crunching those numbers and words!

CHICAGO AREA TI99/4A USERS GROUP
SUMMARY OF CASH TRANSACTIONS
DECEMBER 1-DECEMBER 31, 1986

	TOTAL	FAIRE	LIBRARY	MEMBER-SHIP	OTHER
RECEIPTS	3,383.99	100.00	897.75	1,947.00	439.24
DISBURSEMENTS:					
MAILING	109.62		14.70	36.14	58.78
ADVERTISING	123.50			123.50	
PRINTING	1,636.08			95.34	1,540.74
SUNDRY	157.11	36.77			120.34
	2,026.31	36.77	14.70	254.98	1,719.86
INCREASE IN CASH	1,357.68	63.23	883.05	1,692.02	-1,280.62

SOFTWARE REVIEW

Jack Topham

I am going to stay on the theme of art and graphic programs that are compatable and form a fantastic set of utilities. After the FAIRE I sent for, and received from TEXAMENT, CSGD set 3, and from DAVE ROSE updates to CSGD sets 1 and 2. Dave has produced three remarkable programs that provide great productivity between graphics and the printer. He is also the author of most of the FONTs that are available for TI ARTIST as well as for CHAR SET/GRAPHIC DESIGN. Since I thoroughly covered sets 1 and 2 in the SEPT, 1985 NEWSLETTER, I will address only the UPDATES.

FIRST the latest sets now use some assy routines that speed things up. Set 1 EDITORS for Pictures, Characters, and Graphics now display an 8 by 8 pattern for easy editing in the UPDATE mode. Characters and Graphics can now be viewed as well as printed. FRAME now allows you to turn, flip, or dot reverse Pictures and center them on a full page line or center LEFT or RIGHT side. PRINT MESSAGES now has all options on one screen. GRAPHIC turn, flip, dot reverse, center, etc. are all there. DOUBLE size PRINT is now an assy routine and is fast.

The BANNER utility on set 2 now has all options also on one screen. Yes...turn, flip, etc, etc. Included with the updated files is a set of charts and other pertinent data relative to the FONTS put out by DAVE. Super info! Shows recommended dot spacing, allowed characters, and all special instructions. If you are a regestered customer of set 1 or 2, $4 will get you either update.
2781 RESOR ROAD
FAIRFIELD, OHIO 45014-5053

CSGD set 3 has to be one of the greatest programs available for the 99. First it duplicates MESSAGE from the other sets, a nice convenience. Here you can print MESSAGES using any of the available FONTs along with GRAPHICS or PICTURES. Remember what I told you last month about converting files so they all become grist for the mill. Graphics and or message lines can be turned, fliped, etc so greeting cards are a piece of cake. Dip into set 3 for a FRAME or design one of your own on TI ARTIST, for example. Custom LABELS are a snap. Add a graphic and/or a frame to the address all in one printing. Full screen prompts for any lable size. Truly neat!

The LETTERHEAD option allows you to design letterheads and bottoms using various fonts and graphics. Again all off one menu screen and one printing. As with anything you design on CSGD you can save the file to Disk for later recall. The last option is DOCUPRINT which is worth the price alone. You can print any TI WRITER text file in any one of SIX alternate custom type fonts. This is wonderful but DAVE added the option of doing it in two side by side columns. What can I say?

CSGD set 3 is 3 disks and only $17.95 from TEXAMENTS. Includes DOCs, 25 FONTS, and 40 GRAPHICS! 3 sets of additional FONTS and GRAPHICS are also available at reasonable prices. CSGD set 1 is also $17.95 and set 2 only $12.95. What are you waiting for?

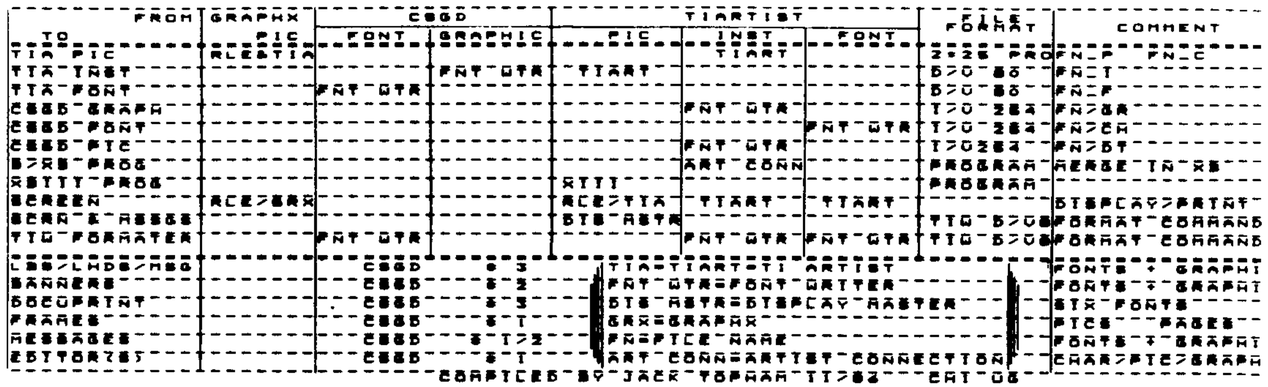
Before I turn to other things, I do want to share DISPLAY MASTER with you. DM by Inscebot from TEXAMENT at $14.94 opens another dimension of utility for TI ARTIST. It allows you to easily create screen presentations that are under full user control. Windowed messages can be added to any TIA picture. Color, duration, sequence, etc all controlled by a TI WRITER file
using TIW formatter commands and a few new ones. A DEMO file is included that makes learning very easy. DOCS are good and the product is a good value.

One more arty thing this month: TI ARTIST vs 2.01 is now available. Registered owners can write for the update. No longer copy protected you can select the environment you want to load from. In addition you can now erase the screen from TIA as well as ENHANCEMENT mode. The good gets better.(see OCT, 1985 NEWSLETTER for full TIA review).

One of the new programs at the FAIRE was RYTE DATA's Clock utility for the CORCOMP clock called SUPER CLOCK SUPPORT. The utility provides display of TIME, DATE, DAY and your choice of a 12 or 24 hour time base. Two countdown timers are also available to the user. The program resides in Assy space and is operated by CALL LINKs. Setting the clock is done in the same manner. At nearly $20, the program was a bit dissappointing as purchased. By writing a simple menu/loader I am able to easily set the clock and call up the DAY, DATE, and TIME. I have provided this file to RYTE DATA but have not heard from them. I provided it at no cost to add value to this product. Oh well, so much for trying to be a good guy. A similar utility will be available soon which may be worth waiting for before you leap. SCS does what it promises but no more.

One last program I picked up at the FAIRE is TI SINGS, a really neat set of programs that provide super DOCS and let you create songs for the 99 to sing. The first is CREATE SONGS which lets you do just that. REFINE SONGS lets you fine tune the words sung to the song phrases. You get all there is to know about TI99 speech here. At $6 it is a real value. Included are a number of songs and a tutorial on allophones. TRIO+ PO BOX 115 LISCOMB, IOWA 50148.

Next month I will review the latest version of MASS TRANSFER but dont wait for me. Vs 4.0 is THE terminal emulator program for the 99/4A. I'll also share two disk based EXTENDED BASICS that are fantastic. And if I can get it mastered, I'll include a powerful artist tool called PRINTER's APPRENTICE from Mc CANN SOFTWARE.



KRACKER KRUMBS

Rich Klein

Gram Kracker: The Little Engine That Could

I have had an opportunity to try out and compare both the Gramcard and Gram Kracker. To say that I'm happy with my purchase of the Gram Kracker would sum things up nicely, but then this wouldn't be much of a review.

To those of you who may not be familiar with what a Gram Kracker does, it is a Grom emulator and a whole lot more. Grom is a proprietary type of memory of Texas Instruments, and up till recently, not a lot was known about it. The entire operating system of your TI is in Grom as well as Basic and most modules. Because Grom was so closely guarded by TI, development by third parties was difficult, if not impossible without sanction from TI.

Then along came Miller's Graphics who developed and introduced the GK and the world of Grom was open to us. This allows the possibility of modifying our consoles and modules to suit our needs, not the needs TI thought we had.

In reviewing this product, there come to bear several levels upon which the GK must be appraised. These levels are:

1. Hardware Construction

2. Software Reliability

3. Overall Ease of Use

In many areas, especially Ease of Use, the strengths or weaknesses of another area may affect the others. Let's examine these areas one at a time and then try to come up with an overall evaluation.

1. Hardware Construction

This unit is constructed of good old fashioned steel. It is enclosed completely on its underside and only open topside enough to insert it into the console and plug in a module, if desired. There are little rubber feet on the underside of the front of the cabinet to hold in line with the module port and keep it from slipping. Its width makes for a snug fit to keep it from being jostled loose. This is necessary because the unit sticks out a good deal and interferes somewhat with the keys on the right side of the keyboard. This, by the way, is my major gripe with this unit. Maybe a certain person who's been known to write a hardware column in this newsletter could figure out a way to move it a little out of the way, Al.

The insides are protected from the top of the enclosure with another rubber foot. This is needed because changing the battery requires disassembly and you wouldn't want to scrape a printed circuit trace in the process. The switches seem to be a might frail, but only time will tell. I wouldn't let your six year old try them out, though.

All the external contacts are gold plated for long life and a good solid connection. In all, the Gram Kracker seems to have been built with the possibility of Paul Bunyan stepping on it in mind. I would say construction is a big plus. It could just as easily have been made of plastic.

2. Software Reliability

The software that comes with the Gram Kracker is incredible. The Loader which is resident inside the unit performs flawlessly. This is unlike the Gramcard which may or may not work properly on modules with ROM. While the Gramcard requires you to know *exactly* what types of memory and the addresses they occupy, the Gram Kracker doesn't. With the Gramcard, you must specify a filename for *each chip* and you must indicate what address that particular chip resides at for each and every chip in any particular module. To be fair, they do have a list in the back of the pamphlet supplied. The Gram Kracker requires only that you name the file that you want to call the module by, and it determines what kind of memory the module contains, and generates all subsequent filenames necessary. The procedure is described in detail in the manual, if you are curious, but it is not necessary for you to know this in order to operate the Loader program.

The procedure for loading or saving modules is simple and straightforward. The first thing to do is make sure that the loader switch on the GK is in the "Loader On" position. Then set the computer to the menu screen. You will notice that instead of TI Basic as selection one, that "GRAM KRACKER" is there instead. This is because the Loader occupies the same memory space as TI Basic when switched on.

Select "GRAM KRACKER" from the menu. You will then see a new menu screen. The selections are as follows:

1. Load Module

2. Save Module

3. Init Module Space

4. Load/Save Console

5. Edit Memory

Selections one and two operate almost identically, except the direction is reversed. Simply select one to load a previously saved module into the GK, or two to save whatever module is plugged in to the little port behind the GK. You will be asked for a file name and after that, some instructions as to the placement of switches will appear on the bottom of the screen. Follow these and that's all there is to it.

Selection three is available to clear out the module space GROMs and ROMs. This is useful to eliminate the possibility of partial programs remaining after a new module is loaded. This only clears out GROMs 3, 4, 5, 6, and 7. It does not erase GROMs 0, 1 and 2. These are for the operating system and Basic.

Selection four appears only if you have Memory Expansion and, I assume, a GK with GROMs 0, 1 and 2 installed. This allows you to copy TI's operating system and TI Basic, if desired, and reload them. Simply select this option and, from the next menu, select which GROMs you wish to work with. Then select one to load those GROMs, or two to save them. As before you will be asked for a filename, but you eill be required to provide a filename for each GROM selected. This is a safety feature because these GROMs perform specific functions the console needs. Also, this is a more advanced feature than simply loading or saving modules, so your technical knowledge needs to be more complete here to

accomplish anything.

The last selection, number five, allows you to view any memory in entire computer and if it is in RAM, GRAM or VDP RAM (random access memory types), you can change any or all of it to suit your needs. Of course, your technical expertise is required here again. This option also requires Memory Expansion to work. You not only can edit memory here, but can also move entire blocks of memory from anywhere to anywhere. You can "fill" areas with a specified byte. You can search for any particular string in any type of memory. You can also "dump" memory to an output device. You can do these things in Hexadecimal, ASCII, or ASCII with a Basic Bias added to it. Any feature can be activated with just a few keystrokes and they are all similar in operation so a minimum of learning is necessary. Pretty flexible. This is the best memory editor I've ever seen.

That pretty much wraps up the Loader. If that wasn't enough, the GK comes with a diskfull of utilities. Although these utility programs perform specific functions, they have been set up to load with the Load Module function of GK's Loader for ease of use. Instructions for each of these are in the manual. The utilities provided are as follows:

EXPLORER and EXPLORER1

These programs are patches to allow EXPLORER to alter GRAM properly.

E/AGRAMDSK or TIWGRAMDSK

These utilities allow either Editor/Assembler or TI Writer to reside in GK along with their respective Editors and Assembler or Formatter as the case may be. When you use these as "modules", the files they normally access from disk are already resident and are simply moved to Memory Expansion and executed. This takes about one half second or so. Nice.

E/A-MOVER or TIW-MOVER

These files allow a previously loaded E/A or TIW to be moved to any GRAM desired. At this moment, I have E/A in GRAM1, TIW in GRAM2, and Extended Basic in its normal space. Unfortunately, you can't use these files with the Gramdisk files due to memory conflicts.

XBCALLS

This is a nice utility. It adds some new subprogram CALLs (eg. CALL SCREEN(), etc.) to E/B. These are:

CALL NEW	Allows NEW to be included in a program.
CALL BYE	Allows BYE also.
CALL CLSALL	Closes *any* open files.
CALL CLOCK	Displays Clock in upper R.H. corner. Adjustable.
CALL CLKOFF	Turns off clock.
CALL CAT	Best Feature. Catalogs Disks; Floppy, Hard or RAM from Extended Basic command mode. Very, very nice.

MSAVE and MSAVE6

With these, you can write Basic (TI Basic only) programs and CALL MSAVE to save them as modules. You give them a name which will appear on the menu screen as a module selection along with anything else in the console or GK. You must have a working version of TI Basic in GROMs (GRAMs) 1 and 2 to select these "modules" or it won't work. The best that will happen is that you will be returned to the Title Screen. Also, the Loader must be off. Adds CALL BYE to programs.

NEWCHARS with any CHARA1 file

Allows changing the default character set in the operating system. If you want to single space the menu screen to display up to seventeen items, then you might want to use this to load the TI Writer CHARA1 file here because it's smaller than the large caps normally used. Also, if you use the Gramdisk files with TI Writer, you *will* want to use this because CHARA1 is not looked for. You are given the choice of Title Screen character set or standard character set.

These utilities greatly expand the usefulness of the GK, although I think the Loader with its Editor are by far the best features of the GK. If these utilities are not enough, then you will be pleased to know that Miller's Graphics has released another GK Utility Disk with yet more features for Extended Basic and enhancements for Editor/Assembler as well. I've tried all the utilities and found them to work as claimed, reliably and faultlessly. This is more than can be said for the *limited* software available to the Gramcard owner, although this may change in the near future.

There is one more file on the utility disk which is not mentioned in the GK manual. This is an Assembly Language source code listing which can be merged into your own assembly program and allows you to move or "fill" any type of memory. This includes moving from one type (VDP, GROM/GRAM, CPU) to any other. Again for programmers, but it can be useful.

3. Overall Ease of Use.

I would say the Gram Kracker is much easier to use because of its basic design and its software. The software is many times more powerful, more flexible, and easier to use than any of the Gramcard's two or three utilities. One thing that makes the GK easier to use is the fact that it contains a battery. This means that when you turn off your system after making extensive changes or loading the modules you want to use for the rest of your life, those items will be there when you turn your system back on. With Gramcard, you *must* reload the card each time you power up. Another feature is the way GROMs 0, 1, and 2 are handled when a module is plugged in. With the GK, those Groms remain the way they were set up, and only the Groms in the module space "disappear". With Gramcard, the console reverts back to its original operating system and your op-system must be reloaded. The last thing is the integrity of your space. With the Gramcard you are entirely at the mercy of the software which may or may not overwrite any existing modules or such that you may have loaded in it. With GK, you have a Write Protect switch which will not allow you to write to *any* memory in GK unless you wish.

There are a few areas that the Gramcard excels. First is where it sits; inside the PE Box out of the way. Second is expandibility. You can install as many as you can fit in your box, up to sixteen, I believe, if you had enough slots. Each card can be addressed individually and can utilize the "Review Module Library". Each card uses two Grom Addresses and can be expanded internally at aditional cost to 512K from 128K. As the GK is it can't be expanded, but "rumor" has it that MG did build a unit with the full sixteen GROM addresses for one MEG of GRAM. At this point, however, the GK is not expandable beyond its 88K and is also no longer going to be produced by MG. Here again, Note that MG will not be producing this unit. That doesn't rule out other manufacturers.

All in all, I'm happy with my GRAM KRACKER, and I've tried both.

Editors Note: Rich has informed me that since he wrote this article he has spoken with Craig Miller. Craig informed him of the possibility of the Gram Kracker being picked up and produced by another company.

THE PASCAL ADVANTAGE: Mike Maksimik

What does one do with a computer which is no longer supported by it's creator? Or better yet, where can you get support for such a machine? Two years before Texas Instruments pulled the plug on the TI99/4A computer, they made a wise decision. Often enough, TI denied the plans for their machine to third party developers for the simple reason that the TI99/4A was ahaead of it's time. So TI made deals with the 'big guys': Microsoft, Milton Bradley, Control Data Institute, and SofTech Microsystems. SofTech Microsystems? Now that name rings a control-g (snicker) for SofTech were the sole distributers of the most widely used disk operating system in the world--the p-system. TI did the right thing this time, because the p-system's design allowed programs written on one brand of computer using the p-system to be transported (in text or code form, of course to an entirely different brand of computer. What makes the p-system unique in this way? Well, an interface is constructed for the computer, be it hardware or software, that adapts the computer to understand p-code, a sort of intermediate code between machine language and the high-level language one is using on that particular machine. Compilers are used to translate this high level code to p-code, which is interpreted by the system interface. The result is transportability of code, which gives a huge software base to our computer. Several compilers are available, for example, Pascal, ForTran, Modula-2, BASIC, ADA, LISP, and PILOT. TI chose to market one of them, Pascal, along with the p-code card and other utilities.

So what good is Pascal anyway? For starts, its a simple language to learn. I used it in high school, where I learned to write simple programs similar to the ones I wrote in BASIC programming class. But there was much more to Pascal. Its commands are simple English words. All of the line numbers have been eliminated and there are no GOTO's, either. (Pascal's inventor, Niclaus Wirth, despised the lack of structure to BASIC.) All of the system's features are at your fingertips, without loading extra support routines or machine language. All of the graphics modes are supported. Device I/O has been brought to a lower level allowing all of the resources of the disk operating system, RS232 interface, and cassette systems to be fully accesses. You can now access any sector of the disk, without machine language! Concurrent processes are in use with version IV.0. What? That means you can initiate up to 255 user-defined procedures, set them going, and still do something else with your computer. Ever wanted to display sprites and graphics freely without having to worry about if it will interrupt the song you just wrote to go along with them? Then U.C.S.D. Pascal is for you. You can set a pattern for a sprite to follow, set it in motion, and it will follow that path. Easily! Ever wanted to build a timesharing system, with multi-users connected to your BBS? You can do it in Pascal. All of the accessories made for a TI can be used with the p-system. I use my ADE clock/calendar/ a/d converter with the p-system. Further, some features you are used to through TI-BASIC or EX. BASIC are expanded in Pascal. 32 sprites, the ability to define character pattens for characters 0-255, all 16 colors, all screen modes, and user-defined machine language subprograms. You can create sound lists using all four voice/noise lines to play back while your computer does something else. You can use the resident PHROM to use speech in your programs. The p-sysem also allows you to store p-code in GROM/GRAM cartridges, or in ROM/RAM in a supercart. In fact, you can combine the compiled p-code or assembled native 9900 code to a Pascal program, and call it like an ordinary Pascal procedure or function. There are no limits but one's

imagination to the uses of the p-system.

For you skeptics out there, the p-system is fully supported by a East coast corporation called Pecan Software Systems. (Pecan took over for SofTech in 1985). The p-system is written for a variety of systems, including IBM PC and PCjr, APPLE Macintosh, Atari ST, Commodore Amiga, Apple II series, DEC VAX/VMS, and others, including of course, the TI99/4A and MYARC Geneve 9640 family computer. And the p-system on the TI is completely ROM based, so no slow GPL interpretation takes place. However, you can make use of the GROM/GRAM attached to the system through the 9900 Assembler. With the Assembler, you can create FAST routines and LINK them using the linker program to your Pascal/ForTran-77/Modula-2/Basic program, and personalize your own system. You can create instant-startup programs, like the ex. basic LOAD filename. You can make the system work for you by the use of workfiles and the full capablities of the EDITOR program. You can perform unlimited device-to-device file transfers with the FILER program. And, if you are a member of CompuServe, there's a special SIG just for p-system owners.

I have been programming in Pascal for 3 years now, and have already learned to use it's advanced features, such as pointers, arrays, linked lists, and sorting techniques. The language has an advantage over others in that its structure makes programs written by one individual easily readible by another programmer. Its simple English word commands, e.g. WRITE, READ, WHILE, REPEAT, DO, BEGIN, END, etc. make learning the language a snap. Colleges are now requiring that new entrants know elementary Pascal before entering into their computer science programs. My mathematics courses at school gave programming assignments in Pascal. It truly is the language of the future.

If anyone wishes to learn more about the p-system, Pascal, and what they can offer you, please contact me. Leave me E-mail (I'm user #318) and I'll get back to you. If you wish to join the newly-formed Pascal SIG, talk to me at the February meeting of the SIG. If you don't already own a p-code card or support disks or both, well, I have the software, and I'm sure someone out there is willing to sell their p-code card. Try leaving a message on one of the many bulletin boards across the country via PC PURSUIT. For those of you that have the p-system but choose not to take advantage of your investment, the frogman/scuba maniac/pascalian has come for you!

FROM OTHER ORPHANAGES

Jack Topham

The MID-SOUTH UG has solved the debt owed by us all to the FREEWARE authors. Each week they DEMO a FREEWARE program, make it available to the members, and take up a cash collection and sent it off. Way to go MSUG!. We all need to wake up and/or grow up. Ripping FREEWARE authors off is killing their incentive to support us. When was the last time you paid for a program you are using?

The BOSTON Computer Society of ONE CENTER PLAZA (MA 02108) is offering a TI WRITER TIPS and TRICKS book for $6 (PH incl). Appears to be a good value.

Ron Albright (Chronicles fame) has a second book for sale. $17 gets you 200+ loose leaf pages of all the better tips gleaned from all the

user groups over the years. Call 1-800-446 4462 then dial 897335 at the tone for more info.

The CENTRAL WESTCHESTER UG in NY lists a nice set of 1986 tax forms as TI MULTIPLAN templates. Write Jim Sleeth at PO BOX 20723. EL CAJON, CA 92021. Not much need for me to do my annual upgrade to INCOMETAX.

The TACOMA (WA) UG offers a tip for when your printer is about to run out of paper and shut down. Just slip a piece of paper into the paper feed and keep going.

From BYOU BYTES two items; 1) REGINA is offering her programs on disk. $1 to her at PO BOX 1502, SAN FRANCISCO, CA 94128 will get you a list. She is tops in handy XB programs. 2) TI still has TI WRITER manuals for the cost of postage. Call 1-800-TICARES. TI does CARE!

From VANCOUVER, WA comes this insight. Turn your computer over and read the LIA number. The last two digits are the year the console was made and the first two the week! Mine reads week 1 of 1983. Lets see who has the oldest one in the group. Speak up!

In the Nov MICROPENDIUM is an updated version of WORD-COUNT which will count all the words in a TI WRITER file. It ignores formatter commands and does at a blinding speed. You can now prove that your essay is long enough. I'll put it in the library ASAP.

While on TI WRITER, the NORTH JERSEY UG tells how to slash the zero so you can keep clear of O's. The formatter command is: .TL 48:48,8,47 Cr. They also tell how to put a blank space in a program file name. Type SAVE DSKn. (FCTN V) Filename.

From AKRON, OH UG is a discovery made by one of their members about DM1000. To print a disk catalog of a different size as follows: At the first screen type FCTN 3. Now enter your printer name (ie PIO) and control codes. For 8 lines/inch condensed print enter 27space 31space 19space *. Save back to disk. To use, type FCTN 7 at the Disk Utility Menu. I haven't tried this but it should work.

From HURST, TEXAS comes some neat TIPS. In XB if you hit FCTN 3 (ERASE) by mistake and loose the line, dont panic. Press FCTN ?. Back it comes. And, if you want your XB program to end with the main TI title screen, add this as your last line instead of END. CALL INIT :: CALL PEEK(2,A,B) :: CALL LOAD(-34804,A,B).

From many UG's: TEXAS INSTRUMENTS PHONE NUMBERS.

TICARES.....1-800-842 2737
TIRESPONSE....1-800-232 3200
BUSINESS COM..1-800-847-2787
SOFTWARE.....1-800-858-4075
TECHNICAL.....1-806-741-2603
PARTS.....1-806-741-3064

TI still CARES!!!!!

From your ORPHANAGE Editor comes info on PC-PURSUIT. $25 per month and you can use GTE-SPRINT circuits all you want on week-ends, Holidays, and evenings. 14 target cities with 11 more due on line now. Call

1-800-TELENET. WHAT A DEAL! GO FOR IT WITH MASS TRANSFER 4.1.

EDITORS NOTE: The following lines are a correction to Jack's last article.
SSSD=SINGLE SIDED SINGLE DENSITY 90K
DSSD=DOUBLE SIDED SINGLE DENSITY 180K
SSDD=SINGLE SIDED DOUBLE DENSITY 180K
DSDD=DOUBLE SIDED DOUBLE DENSITY 360K
DSQD=DOUBLE SIDED QUAD DENSITY 720K

VICTORY OVER DEATH??: Don Jones

Hi there again, Sports Fans!

Well, is this it? Are we maintainers of the "orphanange" finally vindicated? Has our "ship" really come in? The critics are still out, but it certainly seems that that may be the case. Remember when owners of IBM's, Apples, Commiedoors, Ataris, and Amigas used to laugh at us and tell us that we were like Alley Oop because we were riding a dinosaur? Do you remember when so many other computer users told us that our machine was a dodo and the only people who disagreed were those who said it was a turkey? Me thinks that the laughing has stopped. Why? Well, Sports Fans, if you haven't heard (and then where have you been all this time, Bunky?) in one week, two announcements have come forward that have shook the TI environment. The first was the one which I received from a particular supplier, of TI hardware and software, which said that they were now delivering the new Myarc 9640 Family Computer for a cost of $415.00 (plus $5.00 for shipping and handling). The second announcement came from Miller's Graphics saying that they were commencing production of a computer which was being made by IBM, and which would interface at the I/O port of the 99/4A console. The price of this computer being $499.00 (plus $19.90 for shipping and handling charges). Now you can see why I have been so hyper for these last few days.

It appears to me that an unprecedented coup has occurred in the computer world: a computer which the industry had officially announced as "dead" has been fully "resurrected." (It looks like good old Texincia was right; the TI is the Phoenix of the computer world. This is the bird that is destroyed in fire but is resurrected from its own ashes.) With the birth of the Myarc 9640 computer, we now have a computer which runs TI software, uses most of our present TI hardware (save the TI 99/4A console), and avoids the problems and limitations which Texas Instruments built into the internal architecture of the 99/4A. At virtually the same time, Miller's Graphics announced the production of an IBM XT computer with an interface which would allow it to be run through a TI 99/4A console. This in would allow the user to run IBM software and use IBM hardware. This new machine therefore acts as a bridge between the TI and the IBM communities. It allows those users who need access to IBM software the best of both worlds.

My initial reaction to all of this was that there would be an inevitable machine war which neither company could win. The more that I think about it, the more that I hope that this doesn't have to be the case. Both companies have given the TI environment a tremendous and sorely needed transfusion which will act to further insure the life of the TI. Both need and deserve our support.

Here, I would like to digress: I feel that one of the problems which we have is that we sometimes allow ourselves to become too "snowed" and impressed by the very mention of "Big Blue." I don't feel that this is particularly necessary. Those of us who need and use the IBM for business and special, specific applications are well aware that this computer is truly the standard of the industry (though it never excelled in either education or entertainment). It is the veritable model of the "clones" as most people are convinced that IBM is the only way to go, as far as computers are concerned; its only real competitor was the Apple. We owners of the TI computer (who have remained loyal to our machine) are probably more immune to the posturings and excellent marketing techniques of "Big Blue." The source of our immunity is the salutary experience of adopting and staying with an "orphan" called the TI 99/4A.

In the period of time that has elapsed since "Black Friday" we have seen the infinitely resourceful users, of this machine, take over and do things with the TI 99/4A which Texas Instruments never even came close to doing. (The two things which we owe Texas Instruments a debt of thanks for are, 1.) the potential which they built into their machine and 2.) the fact that the machines and their peripherals are "over designed" and are therefore built to be almost as rugged as a Sherman tank.) We have seen TI programmers, users, and assembly language freaks create programs of a sophistication that can rank with and rival the abilities of computers which are still being made and marketed. Those of us who have stayed with our orphaned machines have seen them become more powerful and efficient tools for serious computer appplications. So powerful and strong has our machine become, since TI pulled out of the home computer market, most of us have not felt it necessary to invest in an IBM or any other computer. This has allowed us to ask the sobering question, "Why should we buy another more expensive computer when we already have a computer that can do everything that we have need for it to do?" Though we have always appreciated the value and usefulness of the IBM computer, we have not seen the necessity of purchasing one.

It seem that here we should look at what our TI has evolved into: Many, but not all of us, are dealing with expanded machines with the following (or a somewhat similar configuration): a TI 99/4A console, a dot matrix printer, a RS 232 card, a modem a speech synthesizer, two to four double sided, double density disk drives, 32K RAM memory expansion, and a color monitor. Recently, more of us, this writer included, have been investing in larger memory cards. As a result, more and more of us are working with memory storage capacities of 128, 256, 512, and higher! Those of us who are attracted to programming have complete access to assembly language, BASIC, GPL, FORTH, PILOT, LOGO, and "c." Those of us who have a p-code card also have access to UCSD Pascal. We now enjoy the convenience of RAM disks, print buffers, real time clocks, etc. At the same time, some of us are using, or working towards, the inclusion of hard drives, quad density controller cards, and diagnostic tools such as the excellent GRAM Cracker (from Miller's Graphics) or the GRAM Card (from Mechatronics). I can still remember the time when I, and most users, began with a console, an extra t.v. set, and a cassette tape recorder. I am saying all this to show that we are no longer working with the machines that we started with. Today, we are in a totally different league and a much larger ball park, Sports Fans. We aren't dealing with a 16K "game" machine any more. Times have changed and are continuing to change FAST!

If I was asked the question, "Which machine should our Faire support?" my

immediate response would be, "Neither, rather, we must support BOTH." I see both machines as being useful tools for the TI community. With the Myarc 9640 computer, we now have a machine which can do justice to the increasingly sophisticated software that is constantly being produced. It also eliminates the need for the TI 99/4A console, with its "fire hose" flex cable, and its limited and cumbersome keyboard. It comes with a generous and respectable amount of RAM memory (640K), the ability to run almost all of my present software, 80 columns, compatibility with either a RGB or a composite monitor, and a lovely IBM keyboard. It also supports UCSD FORTRAN, UCSD COBOL, UCSD BASIC, and UCSD Pascal. The Miller's Graphics/IBM computer provides an important link to the IBM community. There are many of us who use the IBM at work and the chance to run IBM software and use IBM hardware is a great treat. In addition, it further insures the continued relevance of our computer. Personally, this is a direction which I would eventually like to travel because of the almost limitless amount of sophisticated software that already exist for the IBM and the great amount of it that is already in the public domain. I am also aware that this can be a very expensive route to travel. Often have I seen people get rid of their TI's in order to get a "real computer" and end up being unable to afford both the software and the hardware necessary to make the machine useful. There is a virtual jungle of confusion out there, relative to the IBM world and it is full of wolves, vultures, and rip-off artists who will gladly sell you anything that you ask for, whether you need it or not. Though the IBM path is an exciting direction to travel, it is one which is not without its own dangers. For this reason, this path is one to be trod with both great care and awareness.

These are exciting times for all of us. If there is any year that I would want to be the chairman of the Faire, this is the one.

Though I still don't have all the information, I have one particular hope. My hope is that I will be able to use both the Myarc 9640 computer AND the Miller's Graphics/IBM XT computer together. Also, if they could "talk to each other," we would truly have the best of both worlds.

Though my information at this time is not complete, it appears that in order to use the IBM XT, we will have to continue to keep the 99/4A console. I hope that this isn't the case. I can't think of a bigger "bummer" than having to use a TI 99/4A keyboard to run IBM programs.

Well, Sports Fans, it is very interesting here in the orphanage and appears that it will stay that way for a while. Stay "tuned" for the next exciting installment of the saga of the computer that refused to die!

Don Jones
Membership Chairman
1987 Faire Chairman

---

library shelf

— Bob Deneter —

Boy it was nice to see all of you at the Jan. meeting. Our first meeting of the new year. The library lines really moved fast that day, didn't they? I told Hank Ellermann we were using Rapid Copy. Rapid copy everyone's name and order. Then bring them to the next meeting. Something new for 87? No, not really. Somehow, I just wasn't meant to attend the meeting. My car got sick (to the tune of $900.00) and decided she couldn't make it. No problem. Remember good ole mom and dad's car? I did. "No problem", they said, "Come get it". Someone else must have been listening. They came and took it. Sorry mom and dad.

I received reports that I missed a good meeting. Some very good demos on TI Artist and Joy Paint by Paul Farber. Todd Kaplan came through with a demo of a Todd Writer he's been working on. I really wanted to see that one. Very unexpected too. Thanks for filling in, Todd. I also heard John Behnke gave a demo on some new stuff in the library. Ata boy, John. Disks 76 to 100? We really have something to brag about.

I saw in the Dec. newsletter I was supposed to do a demo on PR Base. I'm not into data bases. I don't think the one time I ran PR Base qualifies me to do a demo on it. I did, however, have a surprise demo for you. I willshow it to you in Feb. It's the newly released TI Diagnostic Software. The Central Westchester 99er's User Group was nice enough to put the docs. on disk and pass it around. The TI DS will come as a 3 disk set. It comes with a Mini Memory version, an Extended Basic version and the docs. The price is $4.00. This software can be used to check your drives, TI acoustic modem and just about every card TI made. Even the P-Code card, Frogman. I think you'll really enjoy it. I had 100 copies ready for the meeting. Think that's enough? I'd like to thank Ron Paswinski for helping me copy over 300 disks.

I was going to do a review on Stu Olson's Mass Transfer 4.0 . But, Stu was hard at work on 4.1 . Just by chance of luck, I got a copy of it last night(1/13/87). After reading all the docs., I naturally called Stu's BBS first (602 848-6200). Stu has come a long way with MXT since Randy (there's nothing new for the TI) Holcomb so cleverly compared it to Fasterm. Back then, Mass Transfer was just a whole disk transfer program. Fasterm was a full blown Xmodem terminal program. Hardly a comparison. After receiving unjust bad reviews from Randy, Stu decided to make it a term program. My how it has grown. I bought my first copy at the 85 Faire. "Is this the one with 105 sectors of docs.", I said. "129",said Gary Owens. 4.1 now has 182. And Oh what features. I think this is now THE #1 terminal program. Here are some of the features:

- Baud Rate 300, 1200, 2400
- Change Screen and Text color
- Change Parity, Data Bits and Stop Bits
- RS232 Ports 1-4
- Print Spooler
- Monitor Echo On/Off
- Remote Echo On/Off

- 12.5K Buffer (stores whatever comes across screen)
- Upload D/V 80 file
- Xmodem Transfers
- Multiple File Transfers
- Auto Phone Dialer (use with smart modem)
- 8 Page Phone Directory (20 numbers per page)
- PC Pursuit Number Dialer
- Screen Dump
- Log File (as buffer fills, it will dump to any legal device)

As you can see, there are many many features. The Dialer is fantastic. 8 pages of numbers? Now get this. When you choose to dial, you have other choices.

D- Dial any number once.
R- Redial will keep calling a busy number till it connects. Not only that. It will ask if there is an alternate number. It will then alternate calling both numbers till one connects.
P- PC Pursuit will allow redailing any PC Pusuit area code you wish. Stu says it can dial an area code 10 times a minute.

Now tell me that's not fantastic. All it needs is a clock, Stu. It's in the library. Auto-loads with Xbasic or E/A opt.5 $2.00 DON'T for to support the Fairware concept.

The new version of Fasterm is here. Version 1.16pc2 looks exactly like the old. Matter of fact, it is. Some program mods have been made so it will work better with PC Pursuit. Also, some versions of 1.16pc had problems bombing out on the second disk access during a transfer. That bug supposedly has been repaired. I personally have never experienced this. By the way, I use the copy that's in the library. But, keeping with the times, the newer version will now be available.

How about a new coping program? I've overlooked a nice one. It's called RE-DISK IT by James Schroeder. Modified for TI card by Mike Dodd. This is an E/A option 5 track copier that seems to run quite fast. If I remember the docs. correctly, I think they said it will copy an entire disk in 35-45 seconds. And it does. I used it to copy all the disks for the last meeting (the one I missed). It seems to have a very smooth transition between drives. 2 drives are required to run it. Very nice. I like it. $2.00

Along with RE-DISK IT, I found another fairware program I had. It was reviewed by Jack Topham in the Nov. 86 issue of the TImes.
CREATIVE FILING SYSTEM is by Mark Beck. Another Data Base which I am so bad at reviewing. Sorry, Mark. I found CFS very easy to use. The docs. seem to tell you everything to do. They are very extensive and well written. The program requires 2 drives if you want to use it effectively. Files can be made and defined by the user. Each record can be brought up independently, in groups or all together. The search feature allows finding certain records. Mathematical calculations can be handled as well as graphs. Graphs may be in color on your screen or dumped to a printer. I really like it. The examples make it very good for a beginner like me. Check it out in the library. $2.00 .

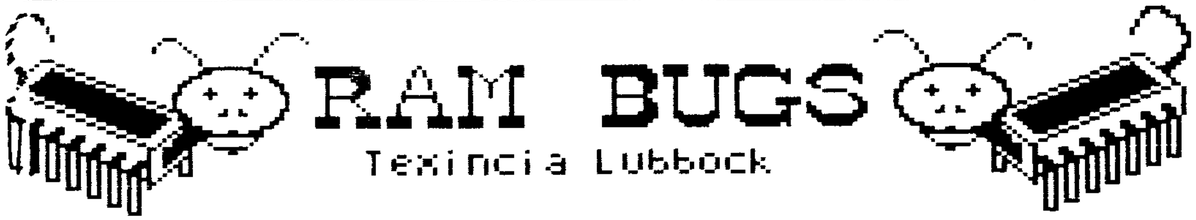
If I would have made it to the last meeting, you would have loved my new labels. They were all made with this new program. It's called GRAPHIC LABELER. It's fairware by Steven J. McWatty of the Ottawa User Group.

Boy they come up with some neat stuff. Graphic Labeler uses designs from Dave Rose's Character Set Graphic Design program. The program asks you to enter a name. This is printed in wide bold characters across the label top. You next enter 5 lines of text. After that, you are asked if you wish auto center. Then you are asked if you wish a graphic design. Answering yes will prompt you to enter one of over 90 designs. The design is then displayed on the left edge of the label outline. You'll like what you see. Next you are asked how many labels to make. 99 is max. It's great for the library. I was making them individually before. A must for every home. $2.00

FUNNELWEB 3.4 (notice the new name) came in 2 days ago. This 2 disk program is another beautiful piece of work from the McGoverns of Australia. It has so many menus and sub-menus, I haven't had time to check them all out. It looks great though. Matter of fact, I'm using it now. It has everything from Editors and Assemblers to 2 DM's and a sector editor. Not counting the Term. program, Data Base and GPL loaders and c compiler. I'll have a better review for you next month. Right now it's in the library and will be available at the next meeting. Auto-loads with Xbasic. 2 disks. $3.00

DM1000 3.5 is also available in the library. For those new comers, DM1000 is a very good Disk Manager by the Ottawa User Group. The program lets you catalog, sweep (erase), or initialize a disk. The option 1 cataloger will allow you to Copy, Rename, Delete, Move, Protect or Unprotect a file. New features include the ability to Type or Print (to screen or printer respectfully) any DV or DF 80 file. An EOF has been added in the lower left corner of the screen. If a file has accidently been deleted, it can be retrieved. Provided you have not written to the disk since the file was deleted. Option 2 is for disk management not file management. It will let you catalog a disk. Copy an entire disk. Erase a disk. Rename and Format a disk. Option 3 will let you protect and unprotect files. Change colors and run Program Image files. All in all, I think it's one of the best known disk managers around. I think you'll enjoy it. Try it. Only $2.00

Well, that about does it for this month. I gotta upload this or I won't make it in the Jan. issue. Next month we'll look at HBM PRINT, FUNNELWEB 3.4, the MP SIDEWAYS I promised this month and a few others. Before I go, I want to thank Texincia for not writting run on sentences. Dave might have thought you and I were one in the same.



And I thought the *TELEPHONE COMPANY* could be slow! It seems our wonderful *EXECUTIVE BOARD* has more trouble making up its mind where to put a telephone line than the *PHONE COMPANY* has getting it done! Some background info:

1. Reputible sources inform me that the initial decicision to acquire an "information line" was presented at the December meeting.
2. *ED SVIZERRO* (don't ask ME to pronounce it) was the Board Member who had the brainstorm in the first place, so the OTHER Board members decided he should "check it out". (He WORKS for *MA BELL* just like I do).
3. At the January Meeting, *Mr. Svizerro* presented the results of his investigation and was told to "go ahead and order the installation". Another Board Member voluteered to secure a *"BEEPERLESS"* answering machine and was given the "OK".
4. It was also decided that the answering machine and assocaited telephone line would be located at *Mr. Svizerro's* residence. Undecided, however, was *WHO* would have access to the *"BEEPERLESS"* code, and *WHO* would be *RESPONSIBLE* for getting all the *BEEPERLESS MESSAGES* to the people for whom they are intended!?! (Heelllooooo; is your daddy there...?)

Does this look like another responsabilty for *MR GRANT*? Will *DAVE (the expose') HAKELY* and *SAM (the Hot Dog) PINCUS* give out their *HOME TELEPHONE NUMBERS AND ADDRESSES*? Will *CHICAGO* have another *BLIZZARD* this winter? Watch this space next month for more revealing facts!

Speaking of revealing facts, I have just learned that *DON JONES* will not only continue to Chair the Membership Committee, but will also cultivate the activities of Chairperson of the Committee to convoke the *FIFTH ANNIVERSARY EDITION* of the *TI FAIRE* to be sponsored by our group. We wish *Mr Jones* much luck in his project and ask the general membership to *VOLUNTEER!* as much time as they can to assist him wherever possible.

Now on to *MORE EXCITING REVELATIONS!!!!* YOUR TI CAN NOW BE AN IBM -- OR IS THAT YOUR IBM CAN NOW BE A TI? Does that mean you can give your FORTH the FIFTH and use CPM and RPG? What about having a BAL with COBAL? Somehow, I don't think I "c" yet?

I wonder if the only *joint* in the venture between *MILLER'S GRAPHICS* and *TRITON PRODUCTS* was the "wacky weed kind" that is illegal? Come on, people, don't you realize what these two groups are up to? We've already got one of the best and easiest to use computers on the market. How many other companies have had the support of their orphaned product remain at the same level as the *TI* after they dropped THEIR support for it? Is this a plot on the part of *MG* and *TRITON* to "dangle the carrot" in front of the *TI USER* and sway him toward the eventual purchase of an *IBM* or *compatible*?

continued on Page 36

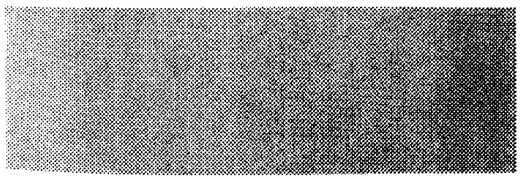
Asgard Software

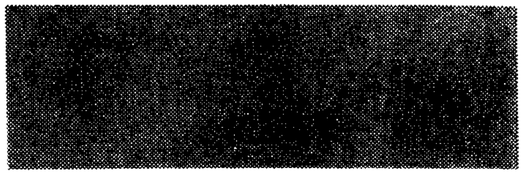
is proud to present a piece of the future:

The first two commercial programs written in c99 for the 99/4A — The fastest language for the 99/4A outside of assembly!

High Gravity

- Is **High Gravity** an educational game or a game program that's educational? Who knows which, and it really doesn't matter considering that this incredible simulation written in c99 (a language faster than Forth and easier to use than BASIC) is one of the best programs ever written for the 99/4A in any language!
- **High Gravity**, by Tom Wible (a professional programmer), puts you in command of a relief spacecraft sent to aid a space station trapped in a strange solar system. The planets in the system are thick as flies, and prevent anyone from leaving or entering the solar system to rescue the unfortunate people in the space station. Your mission is to shoot a capsule of supplies to the stranded astronauts, and you only have ten capsules of supplies on hand. Worse yet, you can't guide the capsules through since they have no engines. Fantastic graphics make this game colorful as well as exciting.
- **High Gravity** is also an extremely accurate simulation of the Laws of Gravity and the motion of projectiles. The fact that this program is a sophisticated lesson on physics is not apparant — it's a really fun game that gives hours of enjoyment to children AND adults. However, for the educational user all varibles of the program may be pre-set; including the initial velocity, the density, size, and spacing of the planets, and much more. High Gravity will even let you save and load interesting flight paths of projectiles for later study — a library of such paths is included with the program.
- In short, **High Gravity** is a sophisticated simulation of space flight that is both entertaining and educational. It is an ideal teacher for the physics student (of all levels), and an ideal game for all ages.





It is simple to use and fully documented. It requires the Editor/Assembler module, 32 K and a disk system. Available for only $14.95.

Total Filer

- Do you have disks and disks full of TI-Writer text files cluttering up your disk library? Do you often catalog one of your TI-Writer disks and find files that you didn't know you had, or even know what they are? Well then, we would like to introduce to you the greatest tool for user's of TI-Writer since the spelling checker; the first and only database designed for text — **Total Filer** by Warren Agee.
- Some database programs say they will let you organize anything, but nothing matches the speed, power and flexibility of a program exclusively designed to let you organize text when it comes to organizing your TI-Writer files. **Total Filer** is a very easy-to-use solution for a complex problem. It is written in c99, an incredibly fast language for the 99/4A, and was designed specifically for handling text.
- With **Total Filer** you can easily create a file-by-file reference of all your text files. Your index can include multiple keyword references for quick searches, as well as several layers of keywords for in-depth descriptions. For searching, **Total Filer** even includes utilities for creating a master listing of the index, as well as letting you compress it to save space on your data disks. **Total Filer** is truly a tool for the "power user."
- **Total Filer** is also very flexible, allowing users to do everything from configure the program for any hardware combination to setting the names of the prompts for different functions. **Total Filer** is the penultimate tool for organizing text of any sort, from magazine articles to computer files, yet it is easy to use and fully documented. It requires the Editor/Assembler module, 32K and a disk system. Available for only $24.95.

Asgard Software

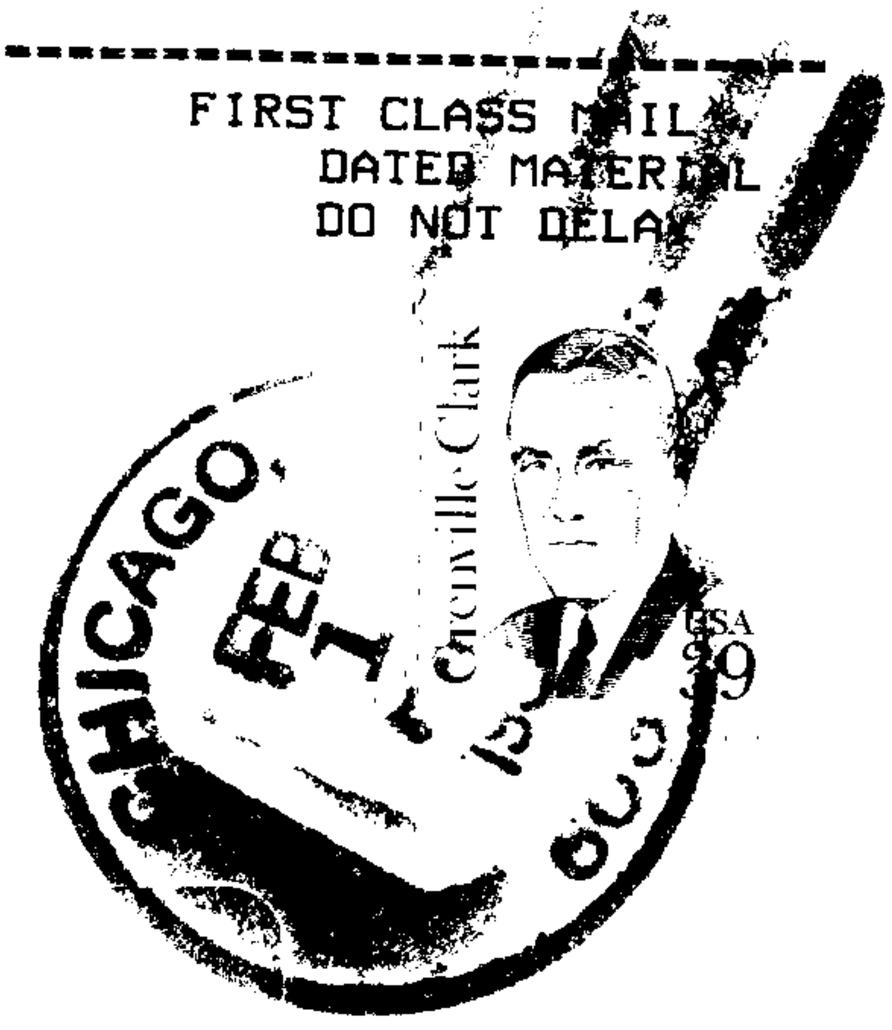
P.O. Box 10306
Rockville, MD 20850
(301) 345-2492

"Serving the TI Community"

Note: c99 compiler for the 99/4A by Clint Pulley

CHICAGO TI USER'S GROUP
PO BOX 578341
CHICAGO, IL 60657

FIRST CLASS MAIL
DATED MATERIAL
DO NOT DELAY



continued from Page 34

If *I* want an *IBM*, *I* will purchase a *SEPARATE IBM* to use. What good, after all, will it do to be able to use the *TI* and *IBM* concurrently if it is necessary to utilize the *SAME KEYBOARD* and *MONITOR*? I can certainly think of many other things to throw away $520.00 on!

Many thanks to *RON ALBRIGHT* and *JONATHAN ZITTRAIN* for the fabulous coverage of the *FORTH ANNUAL CHICAGO TI FAIRE* in the *FEBRUARY* issue of *COMPUTER SHOPPER*. The pics used in conjuction with their well-written article really show how popular our little computer still is and how much pull our organization exerts.

Actually, I don't really know, sometimes, why I take the trouble and make the effort to write this column each month. Sometimes, however, it is worth all that time and effort as was reflected recently in another contributor's column. No names here, but a reminder that we're all in this together and it not just *CAROLE'S* remarkable patience and talent that make this publication work, but the contributions of each of us on a timely bases. Keep up the good work, Carole... (See, *BOB*, I can write with run-on-sentencea, too!) See you at the meeting!